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# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY POLLUTION REPORT

## I. HEADING

**DATE:** November 14, 2000  
**SUBJECT:** Wentworth Mercury Spill  
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**POLREP No.:** POLREP # 1 (Initial and Final)

## II. BACKGROUND

|  |   |
|--|---|
| <b>Site:</b> Wentworth Mercury Spill         | <b>Site No.:</b>                          |
| <b>Task Order No.:</b>                       | <b>Response Authority:</b> CERCLA         |
| <b>CERCLIS No.:</b> N/A                      | <b>NPL Status:</b> Not on the NPL         |
| <b>State Notification:</b> N/A               | <b>Action Memorandum Status:</b> Pending  |
| <b>Incident Category:</b> Emergency Response | <b>Starting Date:</b> October 20, 2000    |
| <b>Reporting Date:</b> November 09, 2000     | <b>Completion Date:</b> November 09, 2000 |

## III. SITE DESCRIPTION

The site is a vacant, three-bedroom single-family house owned by Mrs. Debbie Howard, at 6557 South Wentworth Avenue in the City of Chicago, Cook County, Illinois. The site, which is currently being remodeled, is located in an urban residential area, and is bordered by a vacant lot on the north side, 59<sup>th</sup> Street to the south, Wentworth Avenue on the west side, and a residential home on the east.

## IV. RESPONSE INFORMATION

### A. Situation

On-site activities have been completed at the Wentworth Mercury Spill site. U.S. EPA and START responded to a spill on October 20, 2000. While on site, U.S. EPA and START performed air monitoring activities, and a limited site remediation, and then departed the site.

On October 20, 2000, a plumber, who was cleaning an outside catch basin and basement drainage system noticed small beads of mercury in a floor drain located in a room in the northeast corner of the basement (D-2). The plumber then removed the beads with a shovel, placed the mercury on a pile of dirt from the

catch basin and placed the debris on the ground in the backyard of the home. Mrs. Howard then notified the U.S. Environmental Protection Agency (U.S. EPA) of the mercury spill. The Ecology and Environment, Inc., Superfund Technical Assistance and Response Team (START) was then alerted that an emergency response would be conducted at the site at noon on October 20, 2000.

## **B. Response Actions**

U.S. EPA On-Scene Coordinator (OSC) Bill Simes and two START members arrived on site at approximately 1200 hours on October 20, 2000 to evaluate the situation. OSC Simes interviewed the plumber and Mrs. Howard, determining the facts outlined in subsection A, above.

At approximately 1220 hours, the OSC and START entered the house via the front door to perform air monitoring with a Lumex® RA-519 mercury vapor analyzer (MVA). The air monitoring reconnaissance areas included the hallways, the kitchen, the dining room, three bedrooms, two bathrooms, the basement, and backyard. Initial air monitoring at the site was completed at approximately 1225 hours. Lumex® readings, ranging from 358 micro grams per cubic meter ( $\mu\text{g}/\text{m}^3$ ) in the front entrance to greater than 28,000  $\mu\text{g}/\text{m}^3$  at the drain next to the stairs to the basement in the backyard, were taken from inside and outside the home. All drains located on the 1<sup>st</sup> and 2<sup>nd</sup> floors were screened and all were found to have readings greater than 1,000  $\mu\text{g}/\text{m}^3$ .

Based on the air monitoring data, OSC Simes requested that START perform a limited cleanup by using an HgX solution and pouring the solution into drain D-2. Readings of drain D-2 did drop after this action was taken; however, readings taken throughout the home indicated that a mercury source in the drainage system was still present. OSC Simms informed START that he would schedule the U.S. EPA Emergency and Rapid Response Services (ERRS) contractor for complete cleanup and removal of the mercury contamination in the home at a latter date. At approximately 1235 hours, the OSC and START left the site.

On November 1, 2000, OSC Simms, START Reuscher, and ERRS contractor Ferguson Harbor, Inc. mobilized to the site to begin cleanup of the home. START conduct an initial walkthrough of the site using the Lumex® MVA. Readings ranged from 80  $\mu\text{g}/\text{m}^3$  on the second floor to 21,000  $\mu\text{g}/\text{m}^3$  at a pile of dust next to D-2. All drains were screened again and found to have readings from 714  $\mu\text{g}/\text{m}^3$  at the 1<sup>st</sup> floor bath tub to 112  $\mu\text{g}/\text{m}^3$  at the kitchen sink. OSC Simes instructed ERRS to clean and vacuum all basement rooms, pour an HgX solution into all drains in the home, and power-wash D-2 and the associated basement drainage system. All basement water drained to an outside catch basin where it was collected for disposal. ERRS continued to wash the drainage system; however, mercury vapor levels in the basement were not reduced to acceptable levels.

On November 2 and 3, 2000, the OSC, START, and ERRS returned to the site to continue cleanup activities. On November 2, 2000, ERRS used an electric jack hammer to break D-2 out of the concrete floor and to remove related drain tile. As the drain tile and associated surrounding backfill was removed, START observed that Lumex® readings began to fall. On November 3, 2000, ERRS continued to remove drain tile and fill material. When approximately 10 feet of drain tile had been removed, OSC Simes informed START that removal of the drain tile would be halted and ventilation of the basement would begin. Readings were still not found to be acceptable after ventilating the basement for approximately one hour. The OSC then discussed with START that the HgX might be interfering with the Lumex® readings and that the basement and drain should be allowed to air-out over the weekend. All personnel left the site and returned on November 6, 2000.

On November 6, 2000, START conducted a site walkthrough and found that mercury vapor levels had dropped below  $100 \mu\text{g}/\text{m}^3$  on both the 1<sup>st</sup> and 2<sup>nd</sup> floors and below  $1,400 \mu\text{g}/\text{m}^3$  in the small room, in the northeast corner of the basement, where D-2 was located. The remaining drainage system was then power-washed and the drain tile trench and drain area were then backfilled with clean fill and covered with concrete. START then screened the basement and portions of the 1<sup>st</sup> and 2<sup>nd</sup> floors. START informed OSC Simms that levels were acceptable and that confirmation sampling could commence.

On November 9, 2000 confirmation sampling was conducted. Results were received on November 14, 2000. All samples fell between the clean up levels used of 1,000 to 300 nano grams per cubic meter of air.

| Table of mercury confirmation sampling results. |  |                              |
|---|--|------------------------------|
| Sample number                                   | Location                               | Results (mg/m <sup>3</sup> ) |
| S-1   | 1 <sup>st</sup> Floor , center of room | 0.00027                      |
| S-2   | Blank                                  | ND                           |
| S-3   | 2 <sup>nd</sup> floor, center of room  | 0.00032                      |
| S-4   | Blank                                  | ND                           |
| S-5   | East end of basement                   | 0.00053                      |

### C. Next Steps

No additional work is anticipated at the Wentworth Mercury Spill site.

### D. Key Issues

None.

### V. COST INFORMATION

As of November 09, 2000:

| Group    | Ceiling Cost | Cost to Date | Remaining |
|----------|--------------|--------------|-----------|
| START    | N/A          | \$ 1,700.00  | N/A       |
| U.S. EPA | N/A          | N/A          | N/A       |
| TOTAL    | N/A          | \$ 1,700.00  | N/A       |

Note: The above expenditures are estimated based on amounts known by the OSC at the time of preparation of this report. The cost accounting data shown in this report do not necessarily represent the exact monetary figures that the U.S. Government may include in any claim for cost recovery.

## VI. DISPOSAL INFORMATION

| Wastestream                            | Quantity             | Date of Disposal | Disposal Facility            |
|--|----------------------|------------------|------------------------------|
| Mercury-contaminated soil and concrete | (13) 55-gallon drums |                  | Heritage Environmental, Inc. |
| Mercury-contaminated water             | (2) 55-gallon drums  |                  | Heritage Environmental, Inc. |